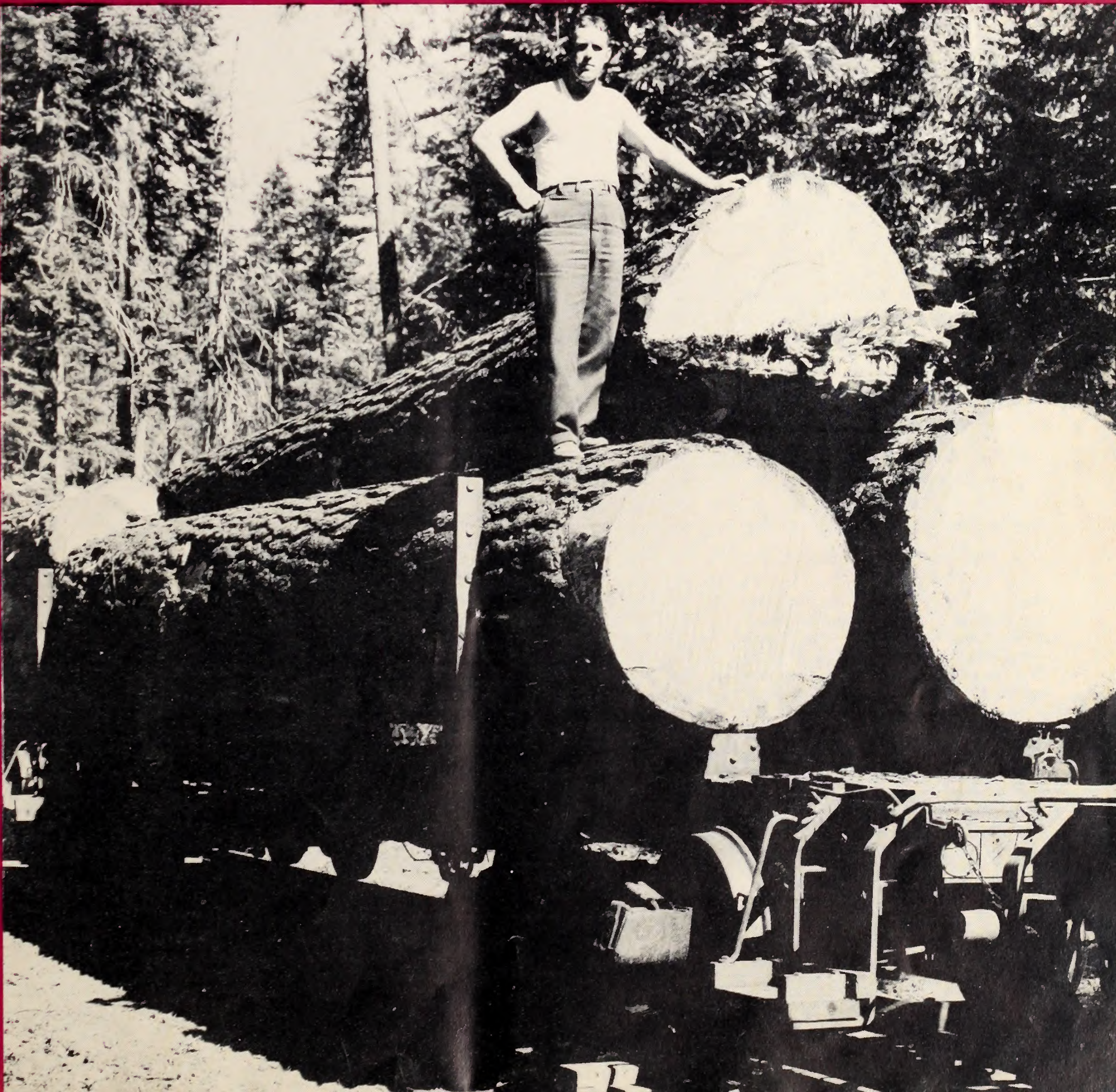
DEPARTMENT OF THE INTERIOR
March 3, 1849

Our PUBLIC LANDS

BUREAU OF LAND MANAGEMENT

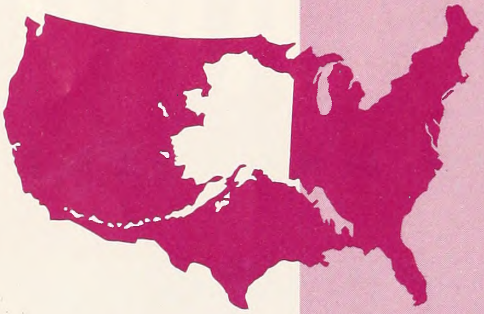
PROPERTY OF
Bureau of Land Management
DSC_LIBRARY

OCTOBER 1951
Vol. 1 · No. 3



OCTOBER 1951 • Volume 1, Number 3

OUR PUBLIC LANDS . . .



500 million acres of land that belong to us and to our neighbors and to all the people of the United States . . . public lands that are rich in natural resources . . . timber, rangeland, water, minerals, and land for every use . . . "active acres" that must be carefully and wisely managed for the welfare of the Nation . . .

As a forum for the exchange of ideas and information on the development, utilization, and conservation of the resources on public lands, this periodical contains no copyrighted material. If pictures or material are reprinted, a credit line should be given Our Public Lands *and the Bureau of Land Management.*

Carlos Whiting, *Editor.*

Issued quarterly by

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Washington 25, D. C.

The printing of this publication has been approved by the Director of the Bureau of the Budget, February 5, 1951

DEPARTMENT OF THE INTERIOR
Oscar L. Chapman, Secretary

BUREAU OF LAND MANAGEMENT
Marion Clawson, Director

BUREAU OF LAND MANAGEMENT ORGANIZATION

Director	Marion Clawson
Associate Director	William Zimmerman, Jr.
Assistant Director	William Pincus
Information Officer	Norma R. Hazeltine
Office of the Chief Counsel	Jacob N. Wasserman
Division of Adjudication, Chief	Clarence R. Bradshaw
Division of Administration, Chief	Depue Falck
Division of Cadastral Engineering, Chief	Earl G. Harrington
Division of Forestry, Chief	Walter H. Horning
Division of Land Planning, Chief	Russell S. Kifer
Division of Range Management, Chief	Gerald M. Kerr

REGIONAL ADMINISTRATORS

Region I. Roscoe E. Bell	Portland, Oreg.
Region II. Luther T. Hoffman	San Francisco, Calif.
Region III. Albin D. Molohon	Billings, Mont.
Region IV. H. Byron Mock	Salt Lake City, Utah
Region V. E. R. Smith	Albuquerque, N. Mex.
Region VI. Herman S. Price	Washington, D. C.
Region VII. Lowell M. Puckett	Anchorage, Alaska

A FOREST MANAGEMENT POLICY

There are different kinds of forests, that serve different purposes. Th are *production* forests managed for their timber products, there *protection* forests which clothe and protect watersheds, and there are *pleasur* forests (typical of those in State and national parks) which are primarily for recreational use. The Bureau of Land Management administers all three types, as well as some forest areas which serve two or more of these purposes in common.

Including the O and C lands of western Oregon, the Bureau manages nearly 6 million acres of commercial forests in the States, and 40 million acres of such forests in Alaska. In addition, BLM administers 25 million acres of woodland in continental United States and 85 million acres of woodland and watershed forests in Alaska. The proper use and management of these valuable areas has recently been the subject of policy formation in BLM, a policy "based on the greatest public interest, bearing in mind all the various important factors, such as national security, social and economi factors, and other relevant matters."

Economic and administrative limitations beyond the Bureau's control have so far prevented BLM from achieving the goal it has set for itself. Basically, however, these goals are three: sustained-yield forest management in the pattern set by O and C practice for all commercial forests and woodland under the jurisdiction of the Bureau where such management is practicable, the protection and preservation of critical watersheds on public lands, and the selective disposition or consolidation of the public lands through exchange of those scattered tracts of forest and woodland which can be profitably administered by other Federal, county, and State agencies or by private owners.

This program imposes the need for over-all classification or inventory of public land timber resources, especially in the face of intensified development of the Nation's lumber and wood-products industry for national defens and security. The policy of the Bureau of Land Management in timberlan administration is to implement this program for the quickest achievemen its goals for the benefit of all the people.

88065717

HD
216
.L3663
v.1
no.3

ALASKA'S PUBLIC LANDS

by **LOWELL M. PUCKETT**, *Regional Administrator*, **Region VII**

Approximately three-quarters of Alaska's 365 million acres are unappropriated, unreserved public domain. This vast area is therefore under the administration of the Bureau of Land Management. Public lands in Alaska are rich in resources and immensely attractive to present-day pioneers, many of whom envision the area as all laid out in plots and ready for the plow of the homesteader or the axe of the man who seeks a small tract for his home or cabin.

Unfortunately, to think of Alaska as a land of readily-available farms, home sites on trout streams where the moose and bear in the nearby woods will supply meat and hides, and a Utopia where living is easy and wealth is certain is only a romantic dream of the would-be Cheechako (or tenderfoot).

Alaska does offer opportunities . . . a great many. The Territory, however, must be developed by hardworking, realistic, modern pioneers.

Orderly settlement and development of the Territory and the use and conservation of our natural resources is the chief objective of BLM in Alaska. Homesteading near the larger settlements is a thing of the past, so good land must be made available at greater distances from towns. A classification program—so that we may plan for the use of the land and its resources—is the Bureau's present greatest need. Poor land should not be cultivated, watershed and primary forest lands must not be denuded, and settlement should be reasonably compact to make provision for roads, schools, and utilities easier.

In recent years, the Small Tract Act has provided the most widely used land-settlement method. Home sites within driving distances of towns and cabin sites for recreational purposes have been made available to hundreds of people.

Villages, too, have become town-site conscious—requiring that areas of public land be made available for industrial uses (through the Alaska Public Sales Act), and for commercial and housing areas, picnic sites, and other public accommodations.

All of this means that cadastral surveys must be made by the Bureau not only to mark and identify the lands on the ground but also to provide the means for describing them. The cadastral surveying program is geared to the development of the Territory. With 99 percent of Alaska still unsurveyed one of our major jobs is to make sufficient surveys to meet the need for all settlement and development activities.

The mineral resources of Alaska are of present and potential importance. For years gold has been the most valuable mineral item exported. Other minerals like oil, tungsten, copper, lead, tin, and zinc will become the exports of great value tomorrow. Coal, marble, gravel, clay, and lime-

(Continued on p. 6)

FOR THE NATION'S DEFENSE . . .

PUBLIC DOMAIN PHOSPHATE

by ROSCOE E. BELL, ***Regional Administrator,*** **Region I**

Phosphates are one of the most vital, the most versatile and most spectacular of the public domain mineral resources. Phosphate is essential to all life, from the small microscopic forms to the giant redwoods and the pachyderms. Phosphorus is an element of many uses in the industrial life of this Nation also—in detergents, tooth pastes, rustproofing material, and cola drinks.

In wartime, phosphorus is the basis for incendiary bombs. It also provides for the movement of troops and ships in the smoke screens of which it is the essential ingredient. Small wonder it is that the phosphate islands of the Pacific were a "must capture" in the military strategy of Japan in World War II, and that the North African phosphate deposits have long been of greatest economic and diplomatic significance in the life of Europe and other parts of the world. The phosphate industry has also been involved in one of the great international economic combines or cartels, constituting a threat to free international trade for this essential commodity.

Very fortunately the United States is blessed with great resources of phosphate mineral deposits. The incompletely estimated resources total billions of tons—enough to meet the Nation's needs for centuries. This is truly one source of our Nation's great strength.

This country's phosphates lie in three major areas. The western deposits—located largely in Idaho, Montana, Wyoming and Utah—comprise the lion's share or about 60 percent of the national resource. Florida has the second largest, or about 38 percent of the Nation's resources. The remaining 2 percent lies principally in Tennessee.

The use of these resources has not been based on abundance but upon the development of industry where the need was greatest; consequently, the smallest deposit was until recent years our principal source of phosphate materials and even at the present time as much as 15 to 20 percent of the Nation's phosphate comes from the very limited Tennessee deposits. The Florida depos because of their location near tidewater, in rece years have become the major source of phosphate raw materials. About 60 to 70 percent of the industry's production comes from the Florida deposits. Western resources have been used very little to meet the need, perhaps 5 to 10 percent of the supply of phosphate coming from this source.

This situation was all right in a time when most of the phosphate use was in the old farming sections of the East and South—and when industrial uses were also centered in the East. The largest single use of phosphate is by far that of the phosphate fertilizer industry.

The significance of phosphate in agriculture is twofold. It is essential for crop production, and the changes in agriculture which have occurred in recent years have made it exceedingly more important that limited supplies of native soil phosphate be supplemented by phosphate fertilizers. The second major interest in phosphates lies in the fact that phosphates must be present in the soil in larger quantities if the soil-building leguminous crops are to be produced successfully. Thus the whole soil-conservation program of the farms of the country is dependent upon abundant supplies of phosphate fertilizers. Without soil-building crops permanent agriculture is impossible.

The western phosphate industry has been under-developed to meet the demands of the West, to s nothing about the Midwest and other areas of the United States which lie closer to the phosphate sources of the West than they do to the phosphates of eastern United States. As absurd as it may sound, Florida phosphate has been shipped to Baltimore, Md., for processing into fertilizer, thence to Portland, Oreg., for transshipment by rail to the very area of our largest phosphate resources in southern Idaho. Within a stone's throw of the Nation's greatest phosphate deposits, it has been possible to buy Florida-mined and Maryland-processed phosphate fertilizer.

Another consequence of the deficiency of western manufacturing capacity is that prices of phosphate fertilizers are 35 to 50 percent higher in the Western States than they are in the Southeast. The high cost of fertilizer is bound to be reflected in the use of smaller amounts of fertilizer than would be needed and are desirable.

During World War II, it became evident that western fertilizer production must be expanded, and some expansion occurred—principally at Pocatello, Idaho, Anaconda, Mont., Trail, British Columbia, and San Francisco and Los Angeles, Calif. But most of the expansion which occurred was for the production of relatively low analysis fertilizer which, because of its low concentration, must inevitably be high-cost when it finally reaches the farmer. The only way to produce cheap fertilizer is to mine the rock as cheaply as possible, and to process it as cheaply as possible to concentrated fertilizer which can be shipped the long distances necessary to supply the widely scattered market area extending from California and Washington to the Mississippi River.

With the Nation again turning toward mobilization for defense, attention has been focused once more on the need for expansion of western phosphate production. But how can this expansion occur? Why hasn't it occurred in the past? These are questions which must be answered if we see the way toward western phosphate development. Phosphates are manufactured by two principal processes. One is the process of using sulfuric acid, which in turn is obtained from the wastes of many of our metallurgic ore smelters, such as the copper smelters of Montana and Utah. The second process is one requiring the use of large quantities of electricity to produce pure phosphorus from the phosphate ore. The electrothermal method is the only one which can produce satisfactorily and economically the phosphorus required for military and chemical purposes. It can also be used for the production of the plant-food phosphates for the fertilizer industry. Thus another source of the Nation's strength lies in the fact that the greatest phosphate deposits exist in the area of abundant potential low-cost hydroelectric energy. Most of the industry's great producers of phosphorus have already investigated and established claims to some of the western phosphate for their present or future use.

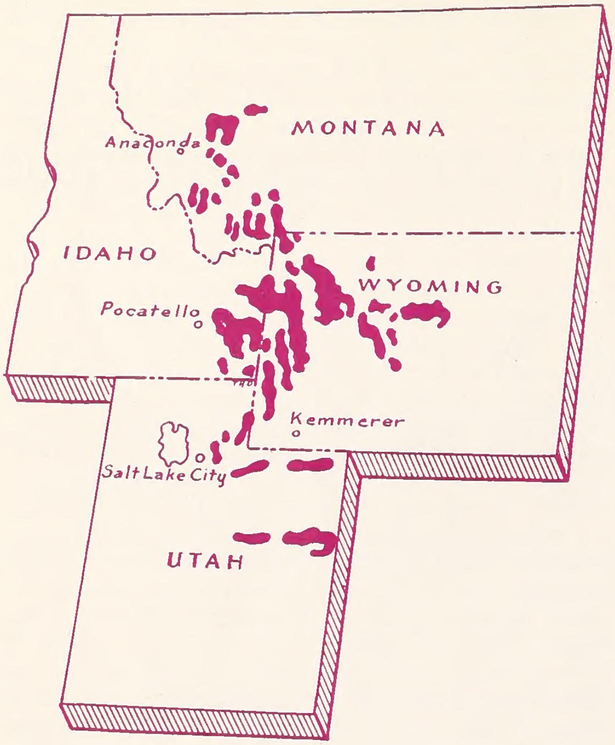
One factory was established about 3 years ago at Pocatello, Idaho, and has been in process of expansion since its first establishment. A second electric furnace phosphorus plant is that constructed at Silver Bow, Mont., and plans were recently announced for a third near Soda Springs in southeastern Idaho.

ABOUT THIS ARTICLE

The mineral program of the Bureau of Land Management is too often visualized as simply a job of issuing leases or patents on applications. Mineral resource management involves the same type of problems as surface resource management—namely, knowledge of the economics of the industry and of the national needs in relation to the potentiality of the resources under our administration. Management may also involve promotion, to encourage development where resources have not been used, but where their use is warranted.

Before coming to BLM, Regional Administrator Roscoe E. Bell spent 3 years making a study of the western phosphate industry and in heading up the Department of the Interior program in this field. He studied the economics of the industry, analyzed the place of western phosphate in relation to the Nation's need, and made some forecasts of future needs in agricultural and industrial requirements for phosphorus.

As part of the Department's program, revisions were made in the law and regulations governing the leasing of phosphates. These were necessary in view of the shift in emphasis from the conventional small scale production of bulky fertilizer material to the electric furnace process for production of concentrated phosphorus and phosphorus products. This article describes briefly the major features of western phosphate development. Reprints of more detailed articles are available—including the article Economic Factors in the Western Phosphate Industry and the study Western Phosphates, which have been reprinted from technical journals. Requests for these or other reprints should be directed to the Regional Administrator, Bureau of Land Management, Swan Island Station, Portland, Oreg.



PHOSPHATE ROCK. The major phosphate rock deposits of the West are shown in this four-State map.

These electrothermal phosphorus-producing plants are beginning to meet the greatly expanding peacetime and wartime needs for chemical phosphorus. As yet there has been no western development of an electrothermal phosphorus industry for use in the production of fertilizer. Although there are important fertilizer companies which have claims to phosphate deposits and which are now developing these deposits, the abundant supplies of low-cost hydroelectric energy have not become available in the vicinity of the phosphate mines.

The Pacific Northwest power system does not extend into southeastern Idaho where the most cheaply mined phosphate exists in large quantities. It was to develop these industries that certain stipulations were imposed on the power companies in exchange for right-of-way privileges across the public lands. These stipulations imposed by the Department in the issuance of the right-of-way would make it possible to use whatever unused line capacity was available on the transmission lines of the company for the transmission of low-cost Government power—to permit the users of public-land phosphates to develop an industry to meet the expanding need for concentrated phosphate fertilizers. These are now being tested in court.

At the present time, power supplies are inadequate to meet the foreseeable demands of the near future. It appears likely that within the next decade, if low-cost power becomes available, th industry will grow to require as much as hal the output of a dam like that of the proposed H Canyon Dam. The output of a dam like Palisades in eastern Idaho would only be sufficient to start one factory. Thus the hydroelectric power—together with transmission systems—is the key to the expansion of the phosphate industry now needed to meet the defense needs for military and civilian phosphates. The Pacific Northwest has the resources both of power and of phosphate which must be developed to meet the ever-expanding national needs for industry, and the expanding needs for the development and conservation of the soils on a million and a half farms in the Midwest and West, which lie within the market area of western phosphates.

The development is inevitable. It is simply a question of when the power can be brought to the phosphates. Private capital is ready and waiting, anxious to develop these resources in the national interest. The Bureau of Land Management has issued leases on the phosphate lands; their development is dependent on the power supplies. Electrothermal phosphorus manufacturing for military uses is the "sword which can readily be beaten into a plowshare"—and it is needed now for both military and domestic use.

ALASKA'S PUBLIC LANDS

(Continued from page 3)

stone are of special value in local development.

Grazing lands in Alaska are limited. Development of the livestock industry has been comparatively slow, but BLM believes that profitable stock raising in Alaska is possible through planning and with improved transportation. Most present leases are on islands in the area of Kodiak, where winter feeding presents fewer problems.

Local use of native spruce timber for building homes, stores, schools, and bridges has been vital to territorial development. BLM, however, is working toward the day when the forest resources will be the raw materials base for important exports.

BLM maintains a modest fire-control organization in Alaska to protect 225 million acres, including 40 million acres of potential commercial forest, 85 million acres of woodland and watershed and 100 million acres of range and wildlife area. This organization is effective so far as it can extend itself, but billowing smoke over the great airports and military establishments being carved out of public lands bears testimony to the expanded requirements of fire control as a part of our defense efforts.

Alaska today is America's frontier, with unexplored, undeveloped resources, and a future that is a challenge to all serious-minded pioneers an particularly to the Bureau of Land Manageme

THERE IS GOLD IN WOOD WASTE

by **JOHN CLARK HUNT**, *Staff Forester*, Region I

Douglas County, Oreg., embracing 27 percent of Oregon's merchantable timber, is the timber capital of the Nation—which is, in effect, saying that it is the timber capital of the world.

The area is very prosperous and exceedingly busy. An interested visitor would be told of the phenominal increase in sawlog consumption—from 142 million board feet in 1940, to 1,134,439,000 board feet in 1948—and that the rate of population increase had been the fastest of any county in the United States. Of the difficulties following in the wake of the industrial boom much would be said of the struggle to get sufficient railroad cars to ship the lumber, the constant shortage of housing, and the need for more municipal cilities.

The basic and most important problem, however, probably would not be mentioned. It is not a good conversation topic. The problem is: How long will the timber last? What can be done to make it last?

Some leaders in the area have been worried by these questions for several years. They have been haunted by ghost towns from Maine to Oregon, crumbling slowly amid cut-out and burned-out forests.

In 1950, Region I of the Bureau of Land Management, and Oregon State College, offered assistance to the Roseburg Chamber of Commerce in making an economic survey and resource inventory of the Inland Umpqua Basin. The basin includes most of Douglas County.

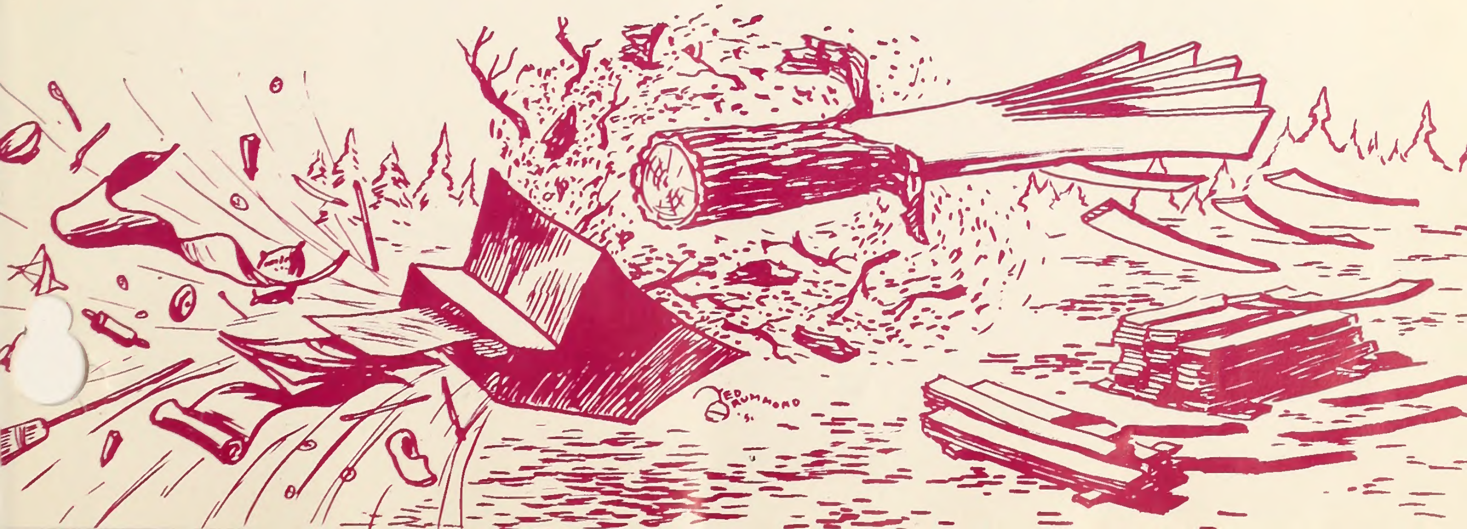
The Forest Products Laboratory at Oregon State College volunteered to cooperate in the project. Daniel L. Goldy, then regional administrator, directed M. R. Hanger, forest economist of the Bureau, to decide the scope of the survey and to prepare an outline. Prof. Chester O. Broders of the School of Business and Technology of Oregon State College was engaged by the Roseburg, Riddle, and Myrtle Creek Chambers of Commerce to make the survey.

The result, a 103-page report, was recently published. It is filled with startling facts—vital and prophetic information for the lumber industry of the entire Nation, and particularly of the economic future of Douglas County.

The report shows that the Inland Umpqua Basin has approximately 44 billion board feet of standing timber which will provide an annual allowable cut estimated at 475 million board feet under sustained-yield management. The amount harvested during 1950 was 750 million board feet,

(Continued on page 12)

WOOD WASTE. This schematic drawing shows that lumber is not the only product of trees. Wood "waste" can be converted into numerous items of daily use . . . such as fiber board, plastics, broom handles, and stock feed.

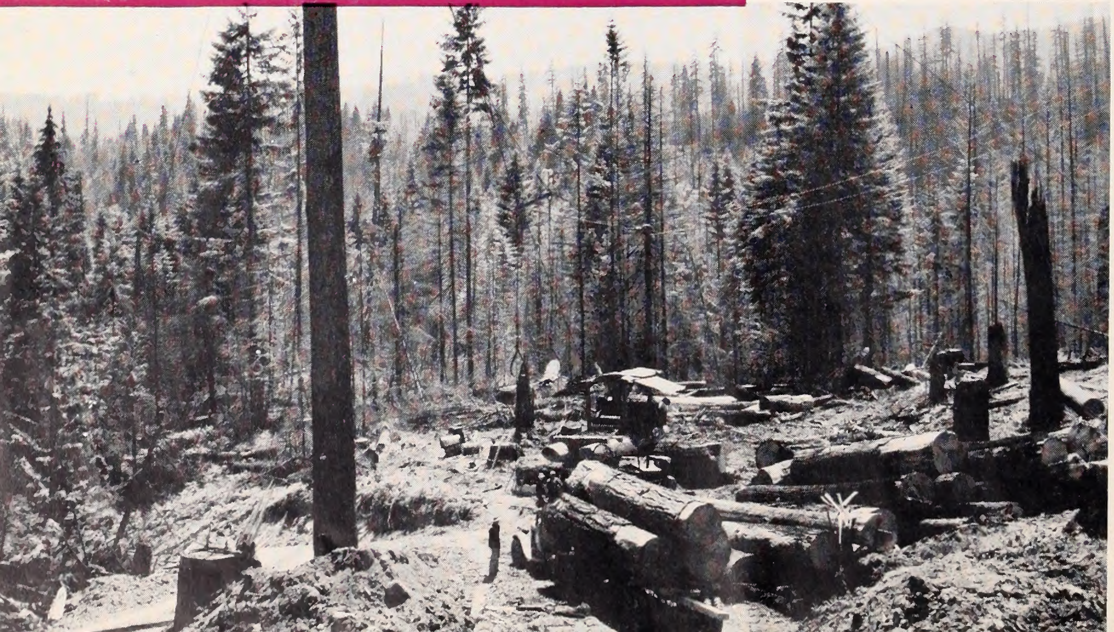


TIMBER FOR DEFENSE. O and C tim pro
and help stabilize local ecomomy.

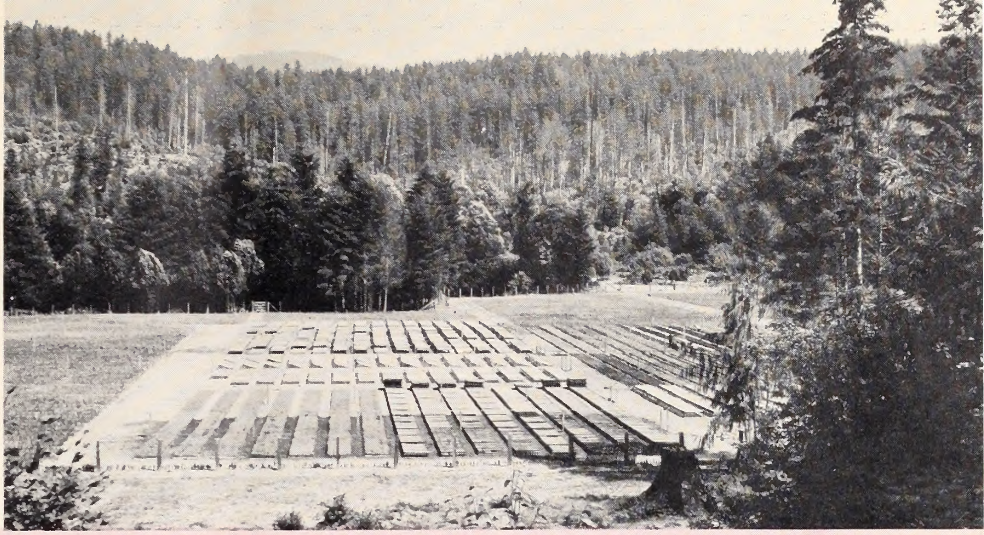
O and C

TWO AND A HALF MILLION ACRES OF
THE NATION'S GREATEST TIMBERLAND
MANAGED IN THE PEOPLE'S INTEREST

WISE USE. Whether in selective cutting or clear cutting, sustained-yield management is practiced.



contribute to national security,



FOREST NURSERY. Fire-ravaged O and C lands are reseeded or restocked with seedlings propagated in beds like these.

LANDS

The O and C Lands of western Oregon get their name from the fact that the lands were granted by the Government to the Oregon & California Railroad Co. in 1866. When the terms of the grant were violated, Congress in 1916 ordered the unsold portion returned to public ownership. Under the administration of the Bureau of Land Management, the forest management program has been continually improved until the O & C is now recognized as one of Uncle Sam's most successful and best-paying projects in renewable resource management.

The O and C checkerboard (so named because alternate blocks of land are either privately owned or in national forests) are managed for a sustained yield of timber products—producing revenues of approximately $9 for every dollar spent in their administration and protection. Income has risen from $374,000 in 1938 to $6,716,000 in fiscal year 1951. Fifty percent of this gross revenue goes to local counties in lieu of taxes.

Since 1937, the O and C lands have been managed for a perpetual sustained yield of timber. A variety of technical practices have been tested and the area has served to demonstrate the economic soundness of sustained-yield forest management.

When the entire O and C area is inventoried, and access roads are built, it is estimated that the sustained-yield annual harvest can be nearly doubled.

VIRGIN TIMBER. Access roads are needed to reach timber in lands such as this typical O and C area in the Cascades.

active acres

ACTIVITY MAP

Oregon is continuing to focus its attention on some 15,386,000 acres of public land administered by the Bureau of Land Management—a vast area where wise use of natural resources is a contributing factor in the expanded economy of the State. The BLM activity map of Oregon on page 16 shows that of the total acreage of public lands in Oregon, approximately 3,000,000 acres are forested with timber as their principal crop. The remaining 12,386,000 acres is rangeland and woodland managed primarily for its forage value.

Figures for 1951 fiscal year are indicative of the Bureau's activities on public lands in the State. Approximately 416 million board feet of timber was sold from O and C lands in western Oregon for $6,715,947.18. An additional 24,813,000 board feet of public domain timber brought $668,948.70.

On the public ranges within the six grazing districts in Oregon, 252,886 head of cattle, 6,540 horses, 168,050 sheep, and 57,977 big game animals were dependent in part for their annual forage requirements. Public domain outside of grazing districts, which is leased for grazing purposes, totals 909,525 acres.

The Bureau of Land Management, in order to increase the carrying capacity of BLM ranges in Oregon has reseeded 44,084 acres, built 1,535 miles of fence, constructed 897 reservoirs, developed 209 springs, dug 67 wells, constructed 1,601 miles of truck road, and made many other improvements such as cattleguards, corrals, and stock driveways.

Other BLM activities in Oregon include the processing of applications for oil and gas leases, granting special land-use permits, and surveying and resurveying large areas of public lands. In addition, areas are classified for home sites and recreational use under the Small Tract Act.

In line with its program of "multiple use," the Bureau of Land Management is expending every effort to make available the natural resources of public lands in Oregon.

RESEARCH

The results of a cooperative research project on the part of BLM and the University of Idaho are reported in a 24-page booklet—Pellet Reseeding Trials on Southern Idaho Range Lands—which is available for limited distribution. **E. W.** Tisdale, Associate Professor and Head, Range Management, School of Forestry, University of Idaho, and Kenneth B. Platt, former BLM range conservationist in region I and now land economist in BLM's Washington, D. C., office, made the study.

Relating experiments and development of methods for treatment, coating, or pelletizing seeds to facilitate seeding, viability, and growth, the research report discusses possibilities in pellet seeding of deteriorated rangelands not suitable for revegetation by other means. Since millions of acres of western range in need of revegetation cannot be revegetated by usual methods, the pellet method, if successful, would be highly important.

The study shows that at present the chief virtue of pellet reseeding is in the ease of aerial broadcasting of seed over large areas. The principal goal of pelletizing—to provide a substitute for dirt covering—has not been attained, since all pellets so far developed disintegrate before the seedlings become established. Few benefits have been attained as yet from fertilizers, disease inhibitors, rodent repellants, hormones, and other factors included in the pellet to facilitate germination and growth. The prospects of developing a successful pellet are considered sufficiently promising to warrant continued research, but until more successful pellets are developed, further large-scale experimental reseedings with pelletized seed are inadvisable.

Public lands in the West affected by acute water shortages could become fertile agricultural areas, if continued research proves conversion of saline waters is practical and economical.

Developing methods to reduce the cost of remov- g or reducing the salt content from ocean waters ould open new frontiers not only in food production but in industrial, municipal, and domestic uses of water.

It is well known that nature's method of replenishing water supplies—evaporating moisture from the oceans and precipitating it on the land—can be supplemented through distillation, chemical, and electrical processes, or by freezing out fresh ice crystals.

But the big problem is still largely one of reducing costs. Should a solution be found, the unlimited, inexhaustible source of water supply in oceans would produce unlimited benefits to the world. Fresh water from inland sources—now channeled to densely populated coastal areas—could then be retained for local use. To the Bureau of Land Management the principal long-time advantage would be the rehabilitation of millions of acres of arid and semiarid public lands under its jurisdiction.

FOR THE RECORD

The Bureau of Land Management believes that sounder conservation management of the public lands will be realized if the users of public lands take part in planning and policy formation and contribute time, money, or equipment in the development of public-land improvements.

Known recoverable underground reserves of oil and natural gas liquids in the United States are estimated by Interior Department experts at approximately 29.5 billion barrels. The known reserves of crude oil in the Middle East are about 48 billion barrels, of which Iran has 13 billion barrels. Of considerable interest in comparisons, however, is the fact that there are also tremendous reserves of oil shale on public lands in the United States. The known reserves of readily accessible rich oil shales in the United States contain recoverable oil of an additional 85 billion barrels. Approximately 300 billion barrels could conceivably be produced by including less productive United States shales.

The cover photo on this issue of Our Public Lands shows typical O and C logs on their way to serve the Armed Forces and defense industries. A Bureau of Reclamation photo on page 3 illustrates a homestead scene near Juneau, Alaska. The bison pictured on page 14 roam on the National Bison Range in Montana, which is administered by the Fish and Wildlife Service. An FWS photo, the buffaloes were "shot" by E. P. Haddon.

REVIEW

The Closing of the Public Domain, Disposal and Reservation Policies, 1900–1950, by E. Louise Peffer, Stanford University Press, Stanford, Calif., 1951.

This is an extremely interesting, useful book which employees of BLM and others interested in the history of the public lands might well read and keep as part of their personal libraries. It is written much in the style and tradition of the earlier classics in this field, namely Hibbard's History of Public Land Policies in the United States and Robbins' Our Landed Heritage. It is not only many years more up to date than either of these, but since it focuses attention on the last 50 years it is able to go into more detail for that period. I predict that it will become a classic similar to the two earlier books.

It takes up the reclamation program, the expansion of national forests, the withdrawals in the early years, the Mineral Leasing Act, the power program, the Public Lands Commission of 1941, the Taylor Grazing Act, and some of the more recent controveries and issues. In an attempt to deal fairly and completely with all events, Dr. Peffer had undoubtedly stepped on some toes. To persons in the Bureau, the most disappointing part will be the discussion on the operations of the Taylor Grazing Act. The act is interpreted as only for the control of grazing, and the opinion is expressed that it has not been fully satisfactory for this purpose largely because livestockmen have been too influential in its administration.

The book is essentially a history. Reading it reveals the need for at least two other equally thoroughgoing studies of the public lands: One should deal with the economics and the use of the public lands (particularly in relation to other resources and to the people of the West), and the other should consider the administration of the public lands. If Dr. Peffer's book serves to stimulate such further studies it will have been worthwhile on this account alone.

—Marion Clawson, *Director.*

BOOK SHELF

Oil and Gas Leasing on the Public Domain, by Lewis Edwin Hoffman, F. H. Gower, Denver, Colo., 1951. Written by the chief of the Bureau of Land Management's Branch of Minerals, an authority on the subject of mineral leasing, the book contains 17 illustrated chapters covering important laws, regulations, and practices affecting oil and gas leasing on Federal lands. Designed as a text or manual, the book's main objective is to facilitate the handling of Federal leases and to educate public-land users concerning Federal policies and procedures.

THERE IS GOLD IN WOOD WASTE

(Continued from page 7)

or three times the sustained-yield allowable cut for the private lands in the basin. Harvest on public lands was, however, considerably below the sustained-yield allowable cut—due, primarily, to the lack of access roads to reach inaccessible National Forest and Bureau of Land Management timber.

The survey uncovered the fact that 41 percent of the logging operations on private land during 1950 removed all trees so the lands could be converted to agriculture and stock raising. This will increase the difficulty of growing sufficient timber to maintain the 245 sawmills in the area.

In spite of these problems, the economic future of the Inland Umpqua Basin can be bright. That is, it promises to be bright if the facts and information assembled in the survey are used. The margin between a strong lumber industry, a high level of employment and purchasing power with stabilized property values, and a depleted forest area with its attendant ills, is the degree of utilization made of each tree cut and the gearing of the annual cut to the annual growth.

The report emphasizes and reemphasizes the tremendous value of the waste left in the woods and now burned in the refuse burners at the sawmills. If this wood waste, which amounts to 60 percent of each tree cut, is manufactured in Douglas County and if a large percentage of the lo lumber is dried and finished in local woodwor ing plants, then used in local factories, employment can be increased even if the harvesting of timber must be reduced to stay within the annual allowable cut.

The big thing is to utilize the wood waste. It is the region's unclaimed gold mine. Solution of this problem by the lumber industry for all forest areas may well prove to be one of the most significant advances yet made in forest conservation.

The Umpqua study showed the need for plants designed to utilize waste and low-grade material. Among the possibilities are: Plants for the extraction of wax, tannin, and other products from bark; the production of soft and hardboards or paper products from sawmill slabs, edgings, trims, sawdust, and logging wastes in the form of limbs, stumps, cull trees, and decayed trees; and the manufacture of wood-sugar molasses from wastes—to be sold as cattle, swine, and poultry feed, or fermented to produce ethyl alcohol.

Recent developments in the Inland Umpqua Basin indicate that the survey is influencing thinking there. One large plywood mill has announced it will operate entirely on salvage material taken from cut-over lands. Other plants to use waste wood may follow—specifically, a second broom and mop handle factory, a kraft paper mill, and a hard-board plant.

Efficiency Corner

AGENCIES SELL TIMBER JOINTLY

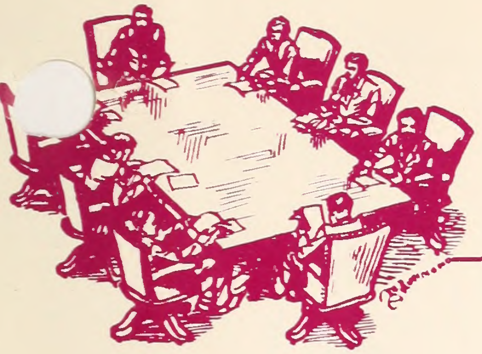
In what was probably the first joint timber sale ever conducted jointly by two Federal agencies, the Bureau of Land Management, in cooperation with the Soil Conservation Service, marked another step toward greater Government efficiency and economic operation.

Approximately 6½ million board feet of ponderosa pine timber, located on and near the Espiritu Santo Grant, New Mexico, on adjacent lands administered by BLM and SCS, sold for $15 per thousand board feet—$5 more than the appraised price.

A joint sale was agreed upon when it was determined by foresters of the two agencies that cutting of the combined area would be more advantageous to the purchaser and result in greater revenues to the Federal Treasury. It was explained that in offering both blocks of timber jointly, a single logging operation could be executed more economically by providing one purchaser with a sufficient base for amortization of necessary road costs. Consequently, the desirability of buying the timber on the part of a timber operator would induce him to pay more in competitive bidding.

Sold at a sealed-bid sale to the highest single competitive bidder, both blocks of timber were advertised simultaneously by the respective land agencies and the timber was marked jointly. Marking was done on a selective basis, insuring that a sufficient growing stock would be left on the area to provide a reasonable cutting cycle.

The instructions for the New Mexico sale differed from BLM's regular procedure in one important respect—requiring that a bidder offer the same unit price for both the Soil Conservation Service and the Bureau timber in order to be eligible to purchase either. The SCS imposed a similar requirements upon bidders for its timber.



THE RANGE ADVISORY BOARD SYSTEM

by **A. D. BROWNFIELD,** *rancher of Deming, N. Mex., and*
Chairman of the National Advisory Board Council

The range advisory boards of the Bureau of Land Management have proven in 15 or 16 years operation valuable adjuncts in the administration of the Taylor Grazing Act. The system was inaugurated by the first Director of Grazing with success . . . so much so, that Congress soon took notice of the good results, and by amendment to the act, made the provision for advisory boards permanent.

The plan for selecting these advisors is in keeping with our traditional American way of choosing Government representatives—that is, by election—and thus had support from the beginning. At the outset, and in compliance with the law, in order to determine who would be allowed to vote, districts were set up in each State, and each livestock roducer therein was allowed a vote for the ad- sors of his own districts.

Instituting the system by popular election allayed suspicion and facilitated cooperation by those users of the public range (or public domain) who had never known regulation, or considered any law necessary for their protection and guidance in the proper use of their fee lands and leased lands.

It brought into the various local offices for assistance to the Secretary representative men from "the wide open spaces" better qualified to advise and recommend on proper division and use of the range, and furnish information on its past use by contending applicants, and the approximate carrying capacities of the range. It would have taken years of research and untold quantities of taxpayers' money to have gathered the information that was quickly furnished by these professionals of the range. Very little dissatisfaction has ever been registered against the system, proof of which lies in the fact that in all of the 10 Western States in which there are grazing districts, citizens of no one of these States have petitioned for a change to something different.

The act did very little to supply any definite grazing policy. The only directive by the Congress for administering these 142 million acres of Federal land (which with other lands managed by BLM, makes 156 million acres in grazing districts) as that permits be issued to "landowners engaged in the livestock business, bona fide occupants or settlers, or owners of water or water rights, as may be necessary to permit the proper use of lands, water, or water rights owned, occupied, or leased by them."

The method of administrative procedure was extremely simple and applicable to range use. All the range was first rated as to proper number of stock to be grazed, and seasons of use. Each applicant for a permit was required to furnish accurate information as to his owned or controlled land and water; he also had to state the numbers and class of livestock grazed on the public domain prior to the passage of the Taylor Act. Where reductions in numbers were found necessary to protect the range such reductions were on a prorated basis in community allotments. In individual allotments, reduction was made to fit the carrying capacity.

The primary object of the law was twofold and has been well served—namely, to stop injury to the soil, and see to it that those entitled to use the land received fair and just treatment. The act also covered use by wildlife and any other public use. With necessary rules and regulations to govern "good range practice," bad tenants are brought up to the standards of good tenants.

In the absence of basic data on range surveys, classification, topography, etc., these advisory board members furnished timely information until such work could be started and completed (much of which has not as yet been finished). Moreover, they serve as popular unpaid policemen for regulating grazing, trespassing, and other abuses. They also give information on necessary range improvement facilities—such as fences, wells, dams, reservoirs, stock trails, driveways, cooperative plans with State agencies, land exchanges, soil and moisture expenditures, and many other programs.

Decentralized government has made and kept America strong. There is no substitute for it. The same has proven true for good land management. Personal contact with the users of the range through the advisory board system has made "home rule" on the range work.

BUFFALO ON THE PUBLIC DOMAIN

by HAROLD J. BURBACK, ***Manager,*** **Denver Land and Survey Office**

A huge shaggy-maned animal silhouetted against a background of mountains and a rising sun has been the emblem of the Department of the Interior since 1849. It well depicts the early development and historic background of one of the oldest of our Government departments . . . since Interior's activities have been inseparable from the phenomenal growth of our West.

Roaming our country westward from the Ohio to California, bison (more familiary known as the buffalo) numbered in the millions. Their hide and meat furnished food, clothing, and shelter for the numerous Indian tribes of the West, as well as for the early settlers and trappers on their trek across the continent. Likewise, in many areas, the buffalo "chip" was the only fuel supply in a "treeless" wilderness. The buffalo's natural instinct to travel in tremendous herds, heedless of man, beast, or terrain, was a phenomenon never matched in the United States.

What has become of the buffalo, and what is his place today on the public domain? Buffaloes in the United States now number about 5,500—after approaching near extinction. Most of these are found in national parks and on Federal refuges and game ranges, which were once part of the public domain. Other buffalo herds are maintained by State agencies or by private owners.

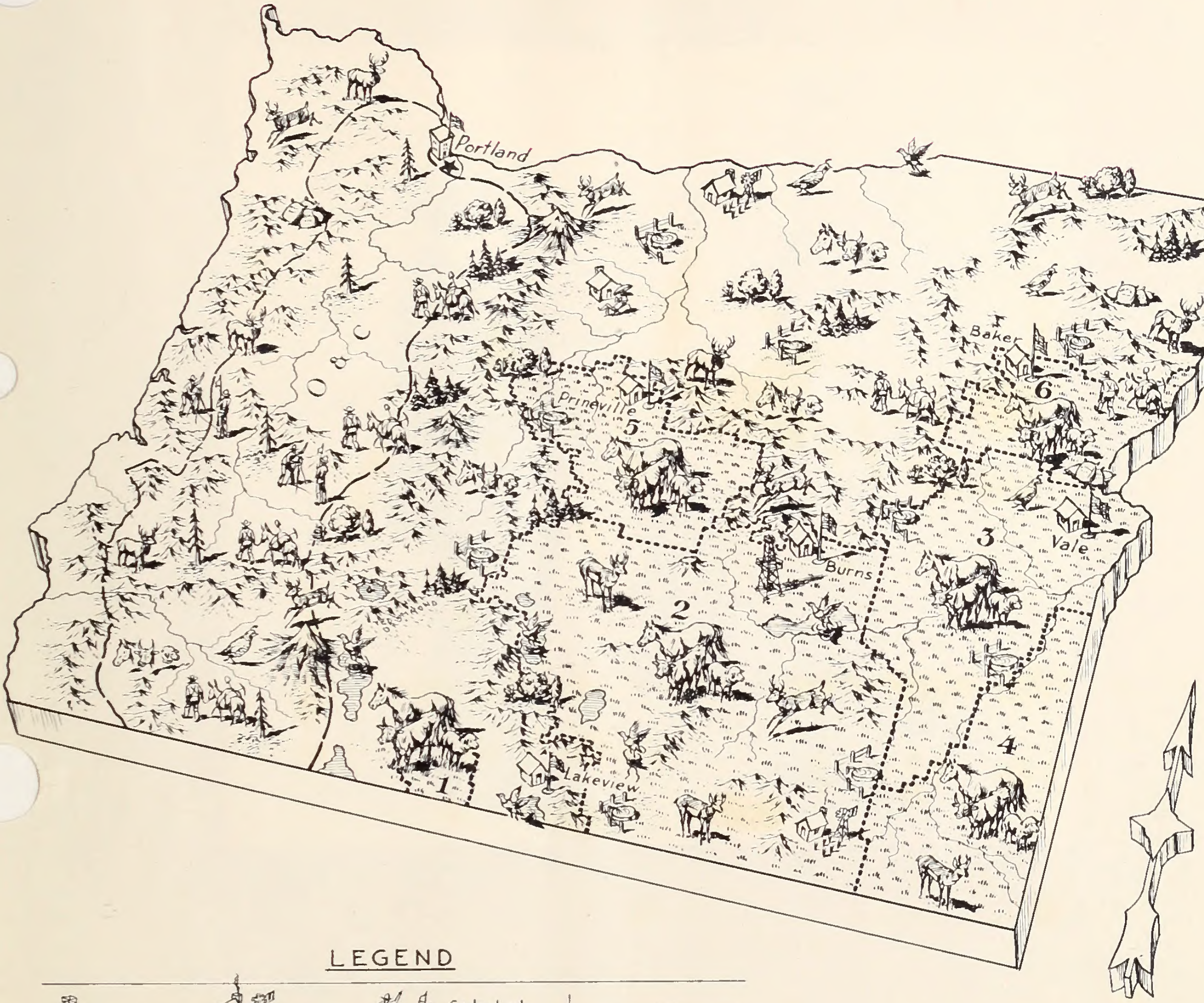
Strangely enough, the Henry Mountain herd in southeastern Utah, numbering 50 head, is one of the few herds running at large and mostly on public domain in the United States. This herd is under the supervision of the Utah Fish and Game Department. Another herd on the open range has grown from three head brought into Carbon County, Wyo., in the 1930's by Isador Bolton. Later, 10 buffaloes were added to the herd. Seldom seen and virtually unmolested on the 3,600-square-mile expanse of unfenced desert and sagebrush range, they now number approximately 50.

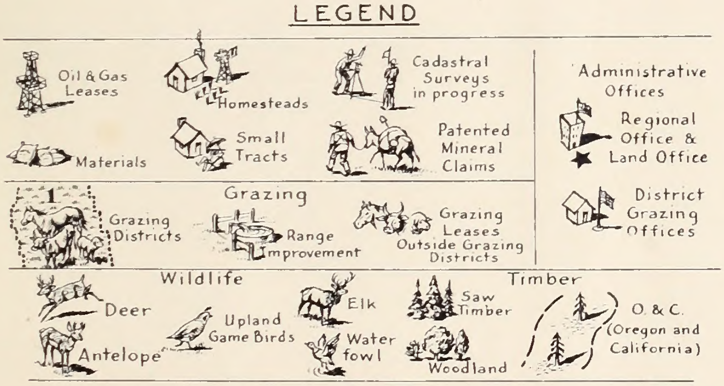
People occasionally ask why the Government doesn't "plant" buffaloes on the approximately 180 million acres of public lands in the West, where they can roam and build up their numbers. As attractive as this may seem, it is not desirable. Because of its close grazing and habit of compact herding, the buffalo depletes the range. It is estimated that two buffaloes use as much range as three domestic cattle. They are also rough on range improvements, and wreck fences and wat developments. Furthermore, regardless of t extent of handling and apparent domestication, buffaloes are wild animals and cannot be trusted.

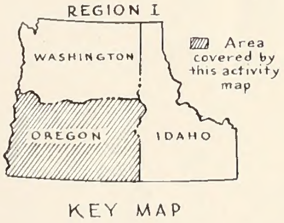
The buffalo does have a place on the public domain, however. That place is Alaska. Two Alaskan herds—numbering in excess of 400—obtained a modest beginning in 1928, when 23 head were brought from the National Bison Range in Montana and released in the Big Delta section southeast of Fairbanks on the Tanana River. From the beginning, these buffaloes have shown complete ability to care for themselves and to withstand the severest winter weather.

Roaming freely, and with a minimum of supervision, the Big Delta herd has reached such a size that a portion of the herd was moved last year to the Copper River flats—where they have scattered widely and made themselves at home.

OREGON LAND-USE AND ACTIVITY MAP







For comments on this map, please see page 10

U. S. GOVERNMENT PRINTING OFFICE : 1951 O—963381

For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. - Price 15 cents

IT'S THE LAND LAW

Color of title? Well, after 30 years I reckon them title papers is sorta yellow!

Misleading as the term may be, color of title has no significance with the spectral shade of a document, as the cartoon implies. In legal terminology, color of title means apparent but not actual ownership, and, as applied by the Bureau of Land Management, refers to a law enacted by the Seventieth Congress in December 1928, which empowers the Secretary of the Interior to issue patents (deeds) for public lands which have been held in good faith, but without proper authorization.

This law is frequently invoked in BLM cases when it is found that the legal title to land is still in the United States, although, through failure to properly examine the title or otherwise, the present claimant and his predecessors in interest have been considered the owners of the land for a great many years.

The most important conditions under which a patent is issued for lands held under color of title are: That a tract of public land, not exceeding 160 acres, has been held in good faith and in peaceful, adverse possession by a citizen of the United States, his ancestors or grantors, for more than 20 years, and that valuable improvements have been placed on the land or some part of it has been reduced to cultivation. The Secretary may then in his discretion, upon the payment of not less than $1.25 per acre, issue a patent to any such person.

Provisions of the act specify (1) that if the area held is in excess of 160 acres the Secretary may determine what particular subdivisions, not exceeding 160 acres, may be patented, (2) that title to coal and all mineral rights are reserved to the United States and are subject to sale or disposal by the Federal Government under the Mineral Leasing Act, (3) that no patent will be issued under color of title if there is a conflicting claim adverse to that of the applicant, unless and until such claim is adjudicated in favor of the applicant, and (4) upon the filing of an application to purchase the lands, together with the required proof, the applicant will be required to pay the appraised price.

Consideration of individual rights and needs, and protection against injustices—a basic principle of any law—is evidenced in the provisions under color of title.